



# BROOKHAVEN BULLETIN

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July 22, 1971

## Geneva Conference Host To 70 Nations

A total of 59 Americans have been selected to present papers at the upcoming Fourth United Nations International Conference on the Peaceful Uses of Atomic Energy.

The Conference, which will attract more than 2,500 leaders from 70 nations, is scheduled at Geneva, Switzerland, September 6-16. The Conference, in a departure from the previous sessions in 1955, 1958 and 1964, will cover topics of interest to economists, government planners and other non-technical executives as well as to nuclear scientists. New and developing space, medical and industrial applications will be discussed.

The generation of electricity by nuclear energy will be the subject of about one-half of the 500 papers to be presented. The papers were selected by the Scientific Secretariat of the Conference which is headed by Dr. Sigvard Eklund, Director-General of the International Atomic Energy Agency.

The environmental, sociological and public acceptance aspects of nuclear energy will be major items along with technological developments. Special emphasis will be given to applications of atomic energy of interest to developing nations.

Dr. Glenn T. Seaborg, Chairman of the U.S. Atomic Energy Commission, has been named by the United Nations as president of the 1971 Conference. He will also present a paper entitled "Recent Advances in the United States on the Transuranium Elements."

Brookhaven scientists who are presenting papers at the conference are: Dr. Mortimer Elkind, Biology, "Mechanisms of Radiation Injury and Repair of Molecules and Cells," and Dr. Herb Kouts, DAS, "A Review of the Goals, Methods and Techniques of Nuclear Materials Safeguards."

## Safety Shoes

There will be no issue of safety shoes on Monday, July 26th, and Thursday, July 29th, due to shoe fitter's vacation.

## IBEW Strike Ends Third Week

The IBEW strike against Brookhaven National Lab will enter its fourth week this Thursday.

From June 30, when negotiations were broken off by the Union, till today, two meetings have been held between the Union and the Laboratory negotiating committee. Both meetings were arranged by Federal Mediators Bottone and Hacker.

A third meeting has been scheduled for Thursday morning, July 22

According to a memorandum addressed to all employees and distributed on July 15, at the two most recent meetings, the Union has modified its demands in some areas of benefits, but has made a wage proposal more than double that offered by the Lab.

In addition to asking for a 12% annual wage increase, the Union is asking for an additional cost of living factor based on the New York City index. According to Personnel Manager Joseph Washburne, "This could result in an annual increase in wages of as much as 18% based on the New York City cost of living index."

"Despite the fact that the union has dropped some of its previous demands in the benefit package, the remaining demands would nevertheless increase the present cost of fringe benefits for bargaining unit employees from \$1.89 per hour to \$2.11 per hour per employee."

Washburne pointed out that, "If agreed to by the Laboratory, the increases requested by the Union would necessitate a substantial reduction in the Laboratory's operations."

The Laboratory reiterated its wage offer of 6, 6½, and 7 percent increase for each year of a three year contract, all increases to be made on the 1971 base. The Lab also continued its offer to improve the new Laboratory group medical plan by extending hospital expense coverage from 31 to 120 days and increasing the diagnostic x-ray limits from \$50 to \$100.

At a 2-hour meeting with 300 members of the IBEW in attendance held last Thursday night, Union president Charles Geonie expressed a belief that the strike would not be settled in the next two weeks.

## Strike History

- June 30 - 2 p.m. Union breaks off negotiations and declares intention to strike at midnight.
- July 1 - Mass picket line forms outside main gate of Lab, and a small group of pickets at North gate.  
Union files unfair labor practices charge with NLRB, citing wasted time in bargaining.
- July 2 - Lab files charge with NLRB against Union for secondary boycott at North Gate.
- July 6 - Union gives out letter at gate asking for support of non-striking employees.
- July 8 - *Brookhaven Bulletin* publishes list of Union demands and Laboratory responses. Commissioners of the Federal Mediation and Conciliation Service call meeting of Union and Lab in Plainview on Monday, July 12.
- July 12 - After meeting for 7 hours in Plainview, both parties announce "no progress." Another meeting is scheduled for Wednesday, July 14.
- July 14 - Second post-strike meeting in Plainview.
- July 15 - Meetings recessed. Federal mediators to call next meeting. Union votes at general meeting to continue strike.
- July 16 - Lab issues statement on status of negotiations.
- July 19 - Third post-strike meeting scheduled for Thursday, July 22 at Plainview by Federal mediators.
- July 22 - Contract negotiating session convenes at 10:30 a.m. in Plainview.

## University Physicists Working At Brookhaven Add To Meson History

A group of physicists from Northeastern University in Boston and the State University of New York at Stony Brook believe they have resolved a recent controversy about mesons - the "glue" of atomic nuclei.

Their findings, based on more than a year of work at Brookhaven National Laboratory, have just been published in the "Physical Review Letters."

Mesons, the smallest known particles of matter, are short-lived subnuclear particles that play an important role in binding together the protons and neutrons in the atomic nucleus. The basic mesons are classified into six major families, each of which is further divided into subgroups designated by a letter or a letter and number. The  $\pi$  and K mesons, for instance, are subgroups of the same family; the  $A_2$  and  $f_0$  of another.

The findings of the Northeastern-Stony Brook research team suggest a return to the pre-1967 concept of mesons, which treated each meson as a single entity.

In 1967, an international team working in Geneva found a startling indication that one of the 28 clearly established subgroups, the  $A_2$  meson, actually divided into two particles. That indication - derived from data showing a two-peaked energy-distribution curve, like the side view of a camel's humps - introduced doubts about the relatively simple picture of mesons that had existed until that time.

In commenting on the uniqueness of the Geneva group's two-humped curve - a bell-shaped curve had been found to be characteristic of other mesons - one of the Northeastern-Stony Brook physicists said:

"It's as though a survey of the heights of people in the U.S.A. uncovered no people - or very few - between 70 and 71 inches tall. Such a fact could conceivably be explained; for example, all people between 70 and 71 inches might have been away on vacation in Europe during the survey. But, in any case, it would be worthy of further study if the distribution of people's heights were a matter of scientific importance."

### Meson Holds Nucleus

Mesons are of scientific importance because they are the basis for the force that keeps atomic nuclei together. In a carbon atom's nucleus, for instance, the six positively charged protons - as with all particles that have like electric charges - have a tendency to repel each other, one of the physicists explained. If that tendency were realized, he added, the nucleus would explode. However, the mesons, which are emitted in the nucleus by both the protons and by the carbon atom's six neutrons, generate attractive forces that are stronger than the electric repulsion force. The meson force allows the protons and neutrons to hold together in a group, much as gravity maintains the solar system.

Since mesons also represent matter in the most microscopic form now known, they are thus of great interest to scientists who search for a more complete understanding of the basic origins of energy and matter.

The Northeastern-Stony Brook experiment closely reproduced the conditions of

(Continued on page 2)

## Reactor Operators Tour



On Friday, July 16, seven reactor operators from the Tuxedo, New York facility of Union Carbide Company toured Brookhaven National Laboratory. The seven men visited the High Flux Beam Reactor, the Alternating Gradient Synchrotron, the High Intensity Radiation Development

Laboratory and the Computer Center. Edward McFadden Jr., of the Applied Mathematics Department (pointing) guided the group on a tour of the Computer Center. At right is Alf Christoffersen, the group's tour guide for the day.

# Laboratory Technician Marty Heine Masters Myriad Medical Mechanics

—by Janice Johnson

"You want to talk to Marty? Wait a minute. I'll see if she's in the rat lab."

Around the corner out of one door popped a head — hair bobbed, body invisible under a formless washed-out brown lab coat stopping mid-calf above socks and sneakers.

I introduced myself, hesitated, and boldly pushed on. "I'm doing a women-in-science type series and would like to interview you sometime this next week."

"And I qualify for that?" the rejoinder and a guffaw.

Now, I admit first impressions are often at the least misleading but after a half hour's conversation I surmised that Marty Heine does not worry about the loss of independence that our specialized society seems to insist upon. Compact, wholesome, and rock-solid as even her name suggests, Marty is a curious tinkerer of animate and inanimate objects alike.

Since coming to BNL in 1956 directly from Wagner College on Staten Island, she has been Dr. Lewis Dahl's lab technician in the Medical Department working with rats genetically bred to have high blood pressure. Presently she is transplanting kidneys — "the size of your pinky nail" — from one rat into another.

Under anesthesia, the rats may stop breathing; yet, she can often bring them back to life by artificial respiration of various sorts. She originally used what were called mouth-to-mouth tubes which merely consisted of plain pieces of polyethylene placed over the rat's nose and mouth followed by the technician blowing.

## Enjoys Machines

After lab hours Marty keeps just as much life in the machines she works with at home. If the watering system leaks, or the tractor knocks, or the stable needs a new addition, she can repair it. "If it's mechanical, it's my cup of tea," she said laughing. "I wouldn't give you 10¢ for a whole day of clothes shopping in the city which my mother drags me by the hair to do."

Before moving onto her 3½ acre farm in Brookhaven where live besides herself her mother, and a horse, two dogs, two cats and some fish, Marty built her stable out of concrete block. She has driven three wells on the property for water for the house and garden. Seven years ago she installed a pool and then put up a 10 foot concrete apron around it. The outside watering system has to be installed and moved by her each year. If that is not enough to keep her busy, she is also renovating the land by planting a half acre of buckwheat to later grow pasture.

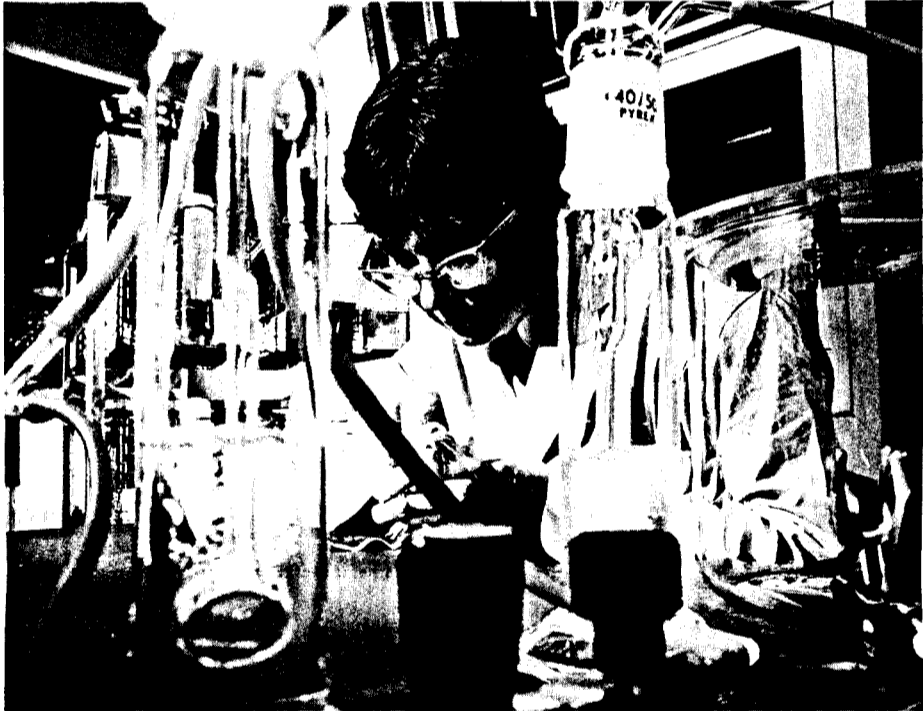
"I'm single, you see," she explained. "With all the machinery around the place, I couldn't afford to pay someone else to keep it, so I had to learn to do it myself. I seem to have a knack for it. From the time I was very young watching my father who was also extremely handy, I became interested."

## Equal Duties

Now, concomitantly Marty does not do too much for the morale of her coworkers in

this sense. "I get into enough trouble because I know a little bit too much about plumbing and electricity," she stated matter-of-factly. "When workers give me a reason why they cannot fix something and I know that reason is invalid, I say so. I should keep my big mouth shut. I feel they resent me as a woman knowing too much, and I don't think it's limited to the working force. I think there are other men around who resent me for knowing things that they possibly should know but don't because they're not interested in it."

## Rats Are Gentle?



"People have seen me hold a rat up to my face and it licks my nose. They think when you put a rat that close to your face, it will bite off your nose. But the rats are really very gentle. It's only when the individual handling the animals is afraid that they bite; they can sense it right through your hands."

Another of her annoyances is if and when special duties arise, they are parceled out only to the males with equal positions. "If we are technicians in the same department," she explained, "we should do the same extra duty chores no matter what they may be. When I started working here years ago, there was no male technician in the department. If there was a ton of rat food to unload, it was my job and I did it. If you're going to get the pay for a job, it shouldn't be 'well, I can't lift that because I'm a woman' and still want the same pay check. For each right, there is a responsibility."

Although she has lived on Long Island all her life — "it sort of grows on you" — Martha Heine is an avid traveler, a Lewis and Clark expedition on wheels crisscrossing the American mainland replete with motor home, mother and two dogs. Not long ago, this motley crew journeyed to California and back rolling over 8800 miles in 15½ days. That was including three days of standing still during breakdowns which Marty fixed herself. Whew! Doing all the driving herself, she said, "I can drive 16 to 18 hours a day and continue comfortably. More than that I get fatigued."

## Loves Animals

One of her trips down south 13 years ago resulted in an unlikely adoption that has grown up to be a strapping 52 inch "wild" teenaged animal at home in Brookhaven. The second stallion she has raised, the

pony is named Chincoteague Folly, "Chincoteague" for his origin and "folly" for the act of buying him. About the size of a Great Dane at two months old, Marty brought him home in the back seat of her Plymouth sedan.

Being an outdoorsy person — "I find that animals and nature are much more satisfying than most of the people you meet" — it is no wonder that one of her main interests is the environmental deterioration and population growth. She predicts a crisis situation to be fast approaching and makes it a point to do as much as she can individually. "I went to six different stores last weekend shopping for returnable bottles."

Then, beneath the cropped hair, the eyeglasses and laugh lines and the baggy coat is the symbol of an antiquated existence when the individual was a complete entity

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## Meson History (cont'd)

the Geneva experiment, but their results were quite different. They found the A<sub>2</sub> energy-distribution curve to be, indeed, bell-shaped, and they concluded that it is a single particle — consistent with the earlier concept of mesons.

Points noted by the scientists which appear to reaffirm the pre-1967 single particle concept include:

1. Their experiment obtained 15 times more data on the A<sub>2</sub> than did the 1967 experiment.
2. They had carefully measured the ability of their apparatus to resolve two closely spaced peaks (if they exist) in the A<sub>2</sub> energy-distribution curve, whereas the Geneva group only estimated the energy resolving power of their apparatus.

The same bell-shaped distribution for the A<sub>2</sub> meson has also been reported recently by three other groups of scientists who studied the A<sub>2</sub> under conditions differing from those of the original Geneva group. Thus they could only indirectly check the Geneva group's reporting of the anomalous particle split. These other scientists included a group at the Lawrence Radiation Laboratory in Berkeley, at Brookhaven and a CERN-Munich group in Geneva.

## How Experiment Was Done

The Northeastern-Stony Brook experimental procedure was briefly described by one of the participants as follows:

Protons were accelerated by Brookhaven's proton synchrotron accelerator to huge energies, up to 28.5 billion electron volts, and smashed into a copper target. The impact created a stream of pions, which are  $\pi$  mesons. These pions were re-directed to a second target — in this case liquid hydrogen, which has a simple, one-proton nucleus. Some of the pions blasted out the liquid-hydrogen proton and created particles of new material.

The scientists measured the momentum and angle of the incoming pion as well as the momentum and angle of the outgoing proton. From this information, they could deduce the mass of the material ("missing mass") newly created by the pion-proton impact. That missing mass in some cases indicated that an A<sub>2</sub> meson had been produced. Using a computer, the scientists sifted through more than 8,000,000 of these particle-creating subnuclear reactions to obtain some 60,000 cases in which the A<sub>2</sub> was produced.

At Northeastern, the participating physicists were Professors David Bowen, David Earles, William Faissler, David Garelick, Marvin Gettner, Mike Glaubman, Bernard Gottschalk, Gerhard Lutz, Ed Shibata, Eb von Goeler and two graduate students, Jorge Mormisato and Ya Wu Tang. The Stony Brook team included Professors Richard Bliden, Guido Finocchiaro and Janos Kirz and a graduate student, Rudi Thun.

## Arrivals & Departures

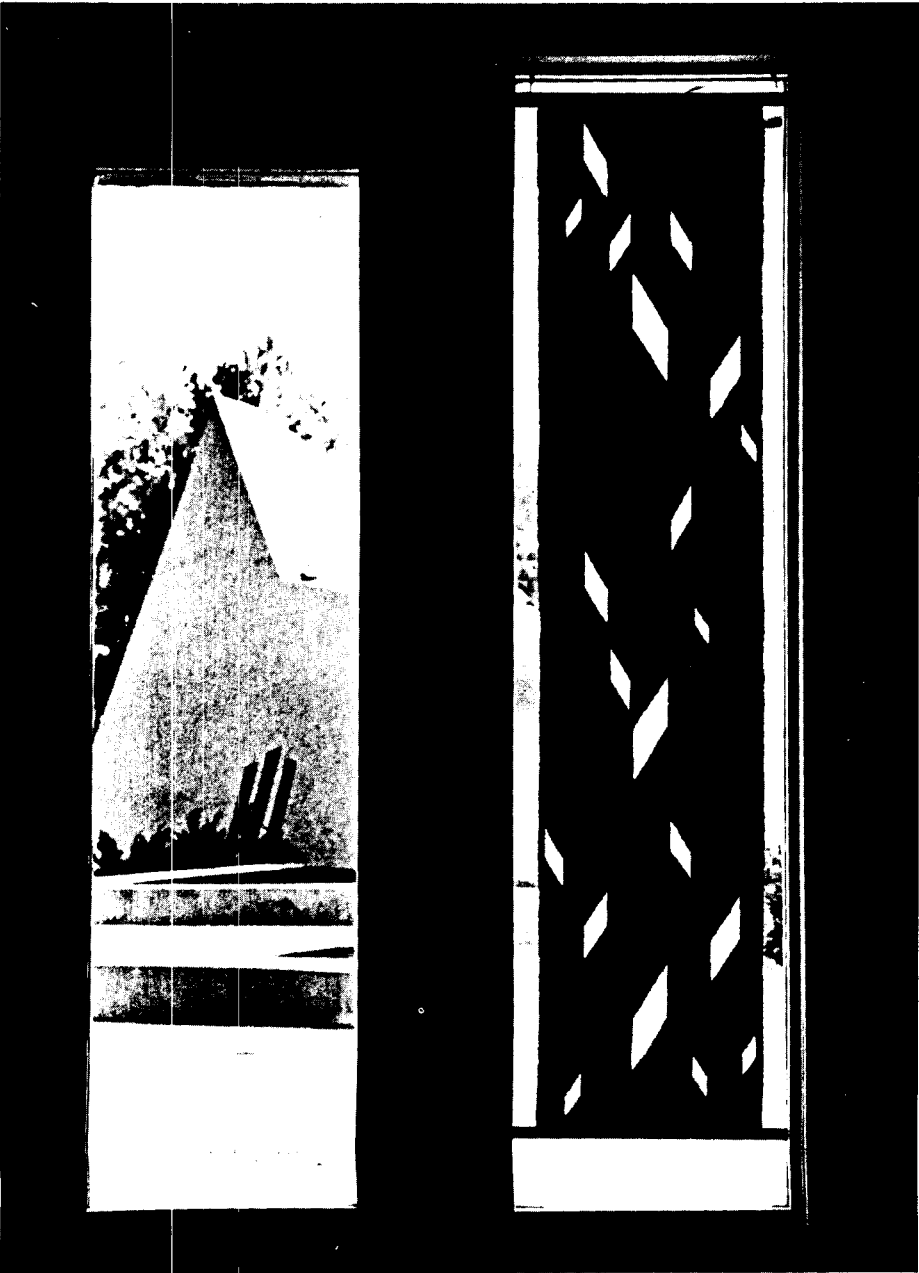
### Arrivals

Janice L. Berry ..... Reactor  
Constantinos D. Varmazis ..... Applied Science  
Gerard Novak ..... Accelerator  
Baiba Whisker ..... Medical  
William H. Lawrence ..... Medical

### Departures

Carolyn J. Barnett ..... A.U.I.  
Louise Bell ..... Medical  
Lester A. Cohen ..... Instru. & H.P.  
Stephen E. Doerschug ..... Accelerator  
Lester D. Hadden ..... Mech. Engrg.

Weaving — by Thelma Becherer



Thelma Becherer's weaving hangs between a pair of entrance doors to Berkner Hall. Using contemporary materials, velon plastic and rayon chenille, Mrs. Becherer has produced a beautifully crafted abstract "stained glass window" which is eminently suited to the architecture surrounding it. Mrs. Becherer works in the Medical Department at the Laboratory and has exhibited widely. Her work is included in many important collections including that of the Museum of Modern Art in New York.

Cafeteria Menu	
Week Ending July 29, 1971	
Friday, July 23	
Clam & Celery Bisque	
Fried Shrimps w/ Tartar Sauce & French Fries	.95
Roast Leg of Lamb w/Mint Jelly & 1 Veg.	.95
Broiled Halibut w/Carlton Butter & 1 Veg.	.95
Monday, July 26	
Tomato Soup	
Roast Fresh Ham & 1 Veg.	.90
Chicken Patties w/Giblet Gravy, Currant Jelly & 1 Veg.	.90
Western Omelet w/French Fries	.80
Tuesday, July 27	
Vegetable Soup	
Grilled Ham, Sausage & Pineapple & 1 Veg.	.90
Creamed Chicken & Mushrooms on Noodles	.90
Sauerbraten w/ Potato Pancakes	.90
Wednesday, July 28	
Minestrone Soup	
Baked Beef Loaf & 1 Veg.	.85
Shrimp Chow Mein on Crisp Noodles & Boiled Rice	.90
Polish Kielbasy w/Mashed Potatoes & Sauerkraut	.80
Thursday, July 29	
Beef Barley Broth	
Barbequed Spareribs & 1 Veg.	.90
Baked Lasagna w/Meat Sauce	.90
Broiled Chicken Livers w/Bacon Strips	.85

Mixed Softball

by Georgia Irving

In the first game on July 13th the Mixed-Ups got their second win of the season by beating the Gotcha's 9 to 8.

Sol Pearlstein, the fearless leader of the Gotcha's, started off the game with a home run and Odelli Ozer did the same in the second inning. Unfortunately there were no men on base either time! The Gotcha's could be great if their timing was better.

In the second game the Saints beat Chemistry 8 to 4. Even the fielding of John Crump and Calvin Nash couldn't keep the Saints' runs down.

The highlight of the second game had to be the catch made by short stop John Crump of Chemistry. A pop fly over the head of the pitcher was converged upon by the 1st baseman, the 2nd baseman, the pitcher, and the short fielder. No one called it so at the last minute John dove for it and caught it on his stomach. When he rolled over and came up with the ball in his mitt the crowd went wild.

Personnel Services  
At the Recreation Office  
Open Daily 9:00 a.m. to 1:00 p.m.

Tennis Tourney '71

The draw has been completed and the schedule posted in the Gymnasium for the 1971 tennis competition, which started this week.

The contests have 19 entrants in the men's singles, 8 in the men's doubles, 7 in the mixed doubles, and 15 in the ladies' singles.

Trophies will be awarded in each of the events in accordance with BERA procedure.

Contestants are required to familiarize themselves with the tournament regulations and to report game results to the Recreation Office as soon as possible.

Preliminary matches are to be played during the scheduled week under conditions mutually agreeable to the contestants. Scheduling the finals and announcement of the finals will be made by the Recreation Office. Balls and volunteer officials will be provided for the finals only.

Players using the courts are asked to conclude their match as soon as possible and to relinquish the court if tournament competitors are waiting to play a match.

To assist in the supervision of the proper use of the courts, a committee of the more active tennis players has been appointed. At a meeting last week, the committee reviewed the "court procedures" and suggested that parking of cars on the concrete apron adjacent the tennis courts - on the east - not be permitted. Adequate parking is available in the regular parking lots, and the movement of cars so close to the courts is an unnecessary distraction. Besides, since there is no approach road, it is ecologically undesirable to drive over the grass.

Recreation Facilities Schedules

Swimming Pool	
(Open Monday through Friday)	
12:00 noon - 1:30 p.m.	Employees Only
1:30 p.m. - 1:30 p.m.	Employee/Family/Visitors
Gymnasium	
(Open Monday through Friday)	
Mondays	
5:00 p.m. - 8:30 p.m.	Basketball
8:30 p.m. - 9:30 p.m.	General Activities
Tuesdays	
5:00 p.m. - 7:00 p.m.	Judo Club
5:00 p.m. - 9:30 p.m.	General Activities
Wednesdays	
5:00 p.m. - 9:30 p.m.	General Activities
Thursdays	
5:00 p.m. - 7:00 p.m.	Judo Club
5:00 p.m. - 9:30 p.m.	General Activities
Fridays	
5:00 p.m. - 9:30 p.m.	General Activities
Recreation Building	
(Tuesdays through Thursdays)	
5:00 p.m. - 10:00 p.m.	
Tuesdays 8:00 p.m. - 10:00 p.m.	
During July & August Summer Student Choir	
Wednesdays 8:00 p.m. - 10:00 p.m.	
During July & August Folk Dancing	

Selected Reading

New Scientist & Sci. J. 51, July 8, 1971

Sir Lawrence Bragg. M. Perutz. 67

Tokaty, space pioneer. S. White. 86-9

Science 173, July 9, 1971

Nuclear reactor safety: A new dilemma for the AEC. R. Gillette. 126-30

Public interest: New group seeks redefinition of scientists' role. C. Holden. 131-2

Science 173, July 2, 1971

Reflections on the decline of science in America and on some of its causes. A. Thackray. 27-31

Princeton-Pennsylvania Accelerator: End of an era in particle physics. D.P. Teter. 36-9

Science 172, June 25, 1971

Radioactive cargoes: Record good but the problems will multiply. D. Shapley. 1318-22

Stony Brook Events

Three concerts, several films and a theater production are among the events open to the public at the State University of New York at Stony Brook between Friday, July 23 and Friday, July 30.

Friday, July 23

Chapter 10 of the 13-episode "Buck Rogers" film serial and chapter nine of the 12-episode "The Phantom Creeps" series will be shown at 12:30 and 1:30 p.m. in the Stony Brook Union Auditorium.

"The Endless Summer," an award-winning film on surfing, will be shown at 8 p.m. in Room 100 of the Lecture Center.

"Spoon River Anthology," a play with music based on the Edgar Lee Masters poems about the citizens of a central Illinois town, will be performed by Theater Three Productions at 8 p.m. in the Union Auditorium, admission \$2.50.

Saturday, July 24

"The Endless Summer" will be shown again at 8 p.m. in Room 100 of the Lecture Center.

"Spoon River Anthology" will be repeated by Theater Three Productions at 8 p.m. in the Union Theater, admission \$2.50.

Sunday, July 25

As part of a series of classical music concerts, pianist Joseph Sullivan will perform "Aria" and "Toccata Nona" by Scarlatti, "Deux Lunieres" by Pick-Mangiagalli, "Valse (E Minor)" and "Ballade (Opus 47)" by Chopin and "Sonate Pathetique (Opus 13)" by Beethoven at 2 p.m. in the Union Auditorium.

Continuing the International Art of Jazz concerts, Budd Johnson and his J.B.J. Quartet will play traditional jazz at 8 p.m. in the Union Cafeteria Ballroom, admission \$2.00.

"The Endless Summer" will be repeated at 8 p.m. in the Union Auditorium.

Monday, July 26

Chapter 11 of the "Buck Rogers" film series and chapter 10 of "The Phantom Creeps" will be shown at 12:30 and 1:30 p.m. in the Union Auditorium.

Mezzo-soprano Elizabeth Patches, accompanied by performers on piano, viola and soprano saxophone, will sing works by Schumann, Brahms, Holst, Ives and Szymanowski at 8 p.m. in the Union Auditorium.

Tuesday, July 27

Chapter 12 of the "Buck Rogers" serial and chapter 11 of "The Phantom Creeps" will be shown at 12:30 and 1:30 p.m. in the Union Auditorium.

The showing of Sir Kenneth Clark's noted film series "Civilisation" continues with chapter 12, "The Fallacies of Hope," at 3 and 8 p.m. in the Union Auditorium, admission 25¢.

Wednesday, July 28

The conclusions of the "Buck Rogers" film series and "The Phantom Creeps" serial will be shown at 12:30 and 1:30 p.m. in the Union Auditorium.

Thursday, July 29

Three comedy film classics, "Public Ghost No. 1," "Dishpan Ben," and "Help! My Snowman is Burning!" will be shown at 12:30 and 1:30 p.m. in the Union Auditorium.

Kenneth Clark's "Civilisation" concludes with "Heroic Materialism," at 3 and 8 p.m. in the Union Auditorium, admission 25¢.

Friday, July 30

An instructional pottery workshop will run from 6-10 p.m. in the Union Craft Shop, fee 50¢ an hour.

Folk Dancing

There is still time to brush up on your dancing before you take that package tour this summer. Don't go to Athens without learning the Syrtos, Kalamatianos, and many other great dances. In Stockholm the Swedish Hambo is the thing, and in Manila - Tinikling. The Brookhaven Folk Dance Group will teach you these and many others, every Wednesday, starting at 8:00 p.m. at the Recreation Hall, in the Apartment Area. Beginners and old hands, singles or couples, young and old - all are welcome - the only requirement is enthusiasm.

Classified  
Advertisements

Positions Available

In addition to publishing positions available at the Laboratory, the Brookhaven Bulletin is currently listing outside job openings which have come to our attention cnd may be of interest to Laboratory employees. Each listing will be repeated (if still available) only once.

TECHNICAL SPECIALISTS (2) - B.S. in biology; B.S. with background in physiology and biochemistry. Medical Depart ment.

ELECTRONIC DATA PROCESSING - Individuals skilled in or trainable n (1) commercial systems design and programming or (2) computer operations OS/MVT and tela-processing. Variety of backgrounds in engi-neering, electronics, communications, general busi-ness, etc., will be considered. Electronic Data Systems Corporation, New York. New York.

For further information, please contact Employ-ment Supervisor, Ext. 2109 or 2513.

Autos & Auto Supplies

63 FORD STATION WAGON - Auto V8. \$250. Pal-medo, Ext. 7762.

70 GTO CONV - 12,000 mi, pwr windows, stereo tape. \$2695. Ext. 7229. 549-5624.

69 BSA STREET SCRAMBLER - 250 cc, orange/blk w/chrome fenders. low mileage, excel cond. \$550. Doug, Ext. 7196. 924-8224 eves.

61 CHRYSLER - Ps, auto trans, V8, new brakes, runs well. 473-7882.

63 OLDS 88 WAGON - Excel cond, r/h, ps/pb, new batt, new starter, 2 new tires, best offer over \$400. Y. Dotha, Ext. 7650/ 521.

65 CHEVY - \$350. Ext. 2411.

71 ALFA CONV 1750 (SPIDER) - Must sell at a sacri-fice. 744-9171.

68 CHEVY ¾ TON PICKUP - 4 w/d, 4 spd trans, HD springs, radio, gauges, Winnebago camping cap. \$2200. Tony, Ext. 7355, 286-2430.

64 JEEP WAGONEER - Ps/pb, auto trans, 4 w/d, hubs, excel cond. \$1050. Tony, Ext. 7355, 286-2430.

66 DATSUN - 4 dr Sal, snows. \$400. Ken, Ext. 7821, 744-6174.

66 CHEVY STATION WAGON - 9 psgr. G. Rayner, Ext. 7157, 727-5194.

68 ALFA DUETTO - Excel running cond, good body, am/fm for best offer. Ext. 7239.

66 MUSTANG HT - Good cond, very clean. \$775. Marty, Ext. 366.

68 PONTIAC GRAND PRIX - Green/blk vinyl top, ps/pb, air, r/h, new tires & batt, 43,000 mi. \$1850. G. Hughes, 727-6676.

TRAILER TIRE - New 4.80/4.00x12, 4 ply nylon, tube type Goodyear Super Rib. \$18. 589-4327.

70 BRIDGESTONE MOTORCYCLE - 175 cc, excel cond, only 3600 mi. \$450 firm. T. Sweda, 475-7227.

65 MUSTANG PARTS - Hood, bumper, tail light, radio, heater, doors, windows. Ext. 2814.

ENGLISH FORD - New rings, valves, clutch, starter gears, front brakes, no rust; inspected, runs well, best offer. Jon, 744-5969.

69 CAMARO Z28 - 32,000 mi, good cond. Asking \$1800. A. Nauman. Ext. 388, 286-3764 eves.

69 VW SQUAREBACK - 20,000 mi, r/h, rear window defroster, bumper trailer hitch, excel cond. \$1900. Ext. 2298, 286-0783.

VW WHEELS & SNOW TIRES - 2 ea, mounted & bal-anced, for Squareback or Fastback, 4000 mi. \$40. Ext. 2298, 286-0783 eves & weekends.

68 PLYMOUTH SATELLITE 9 SEAT WAGON - Auto trans, V8, radio, ps, h.d. brakes & susp, avail 8/12. \$1500. Ext. 2834.

66 FORD FALCON - Mileage only 29,000, excel cond, visitor leaving. \$700. Engelbertink, Ext. 2218.

65 FORD MUSTANG CONV - 6 cyl, 3 spd, good cond. \$600. 981-1826.

67 SUNBEAM MINX - 4 dr sedan, r/h, auto trans, very good running car, clean. Asking \$850. Jake, Ext. 2719.

64 CHEVELLE SS - Auto trans, r/h, 2 dr hdtip, good running, clean, body needs paint. Asking \$399. Jake, Ext. 2719.

Boats & Marine Supplies

20' RACING SLOOP - Mahog hull, outboard, all sails, ready for season, excel cond. \$1800. 862-8084 after 6.

OUTBOARDS - 7½ Evinrude, \$50; 7½ Evinrude fleet-twin w/tank. \$125. Mrs. Heinrich, 744-6211.

17¾' SAILBOAT - Fiberglassed, dacron sails, in water & ready to sail, reasonable price. Seltzer, Ext. 343.

COMBINATION BOAT & UTILITY TRAILER - Very good cond. \$60. Bob D. Ext. 7822.

SIGNET 20' - Fiberglass sloop, sleeps 4, head, sink, galley, 4 bags of sail, many extras, low price. Ext. 2993, 744-9436.

9½' SAILING DINGHY - Fiberglass hull, dacron sail, sturdy & dry, used only 1 season, excel cond, extras. P. McHugh, Ext. 7163, 586-3579.

Miscellaneous

BABY THINGS - Car cradle, \$5; baby carriage, \$3; stroller, \$7; playpen, \$5; walkers, free. Nakanishi, Ext. 539.

AF-FM RADIO - Not portable, \$8; 19" TV, \$5; vacuum cleaner, excel cond, \$10; barbecue, \$3. Nakanishi, Ext. 539.

GIUITAR "KAY" - Steel string (acoustic). \$45. A.C. Nunes, Ext. 367.

GIRL'S RIDING BCOTS - Size 3, outgrown, worn once. \$8. 286-8517 after 5:30.

COLOR TV RECEIVER - RCA 20" console, \$25. L. Rogers, Ext. 2373.

LG METAL PICNIC COOLER - \$5; GE 12 lb wash machine, \$30; green leather swivel chair, \$5. 289-1754.

16" CONVERTIBLE BICYCLE - Boy's or girl's, w/train-ing wheels, \$10; maple love seat, \$10. 289-1754.

GE WASHER & DRYER - 16 lb capacity, white. \$150/ both. Ext. 595.

GAS DRYER - Very good cond, RCA Whirlpool, rea-sonably priced. 732-5945.

MARVEL ELEC BASS AMP - 20 watts, 12" speaker, can be used for other elec instruments. \$50. Dave, Ext. 2593.

ELEC GUITAR - Solid body, 4 pickups, individual con-trols, w/case, excel cond. \$70. Dave, Ext. 2593.

GIBSON WAH-WAH PEDAL - For elec guitar or organ, like new. \$40. Dave, Ext. 2593.

ELEC "HOLLOW BODY" BASS GUITAR - 2 heavy duty pickups, vol-tone controls, like new. \$60. Dave, Ext. 2593.

PIANO - Baby Grand by Cable, full keyboard, bench incl, excel cond. \$800. Dave, Ext. 2593.

TV - GE 24" console, excel cond. \$50 firm. 281-5569.

KELVINATOR ELEC DRYER - Good cond, reasonable. Bob, Ext. 7203, 281-4371.

BABY CARRIAGE - Very good cond. \$15. Ext. 2240.

SUMMER STUDENT - Willing to babysit any eve after 5. C. Gibson, Ext. 2832.

CIRCULAR FLUORESCENT LIGHT FIXTURE - W/32 w bulb, \$5; 4 spd portable record player, \$10; doll carriage, \$5. B. Jellett, 744-2097.

64 NIM-ROD TENT TRAILER - Ideal vacation home, many extras, ready to roll. Ext. 657, JU8-2328.

2 SPD ELEC TRIMMER/EDGER - 1 yr old, never used, Sears best. Cost \$50, sell \$25. Ext. 423.

CHINA CLOSET - Mahog w/glass front, 2 lg drawers. \$50. L. Petro, 286-8249.

20" BICYCLE - Good cond. \$15. Carl, Ext. 2501, 281-7627.

ROSE BROCADE LOVE SEAT - 9x15 Karastan rug, beige & rose. 744-2005.

GE ELEC STOVE - Good working cond, will deliver, best offer. C. Curran, 744-0425 after 5:30.

WOOD BURNING STOVE - Best offer, will deliver. C. Curran, 744-0425 after 5:30.

STEREO RECORD PLAYER - W/2 speakers, \$65; TV, \$65; portable radio, \$20; iron, \$3.50; bottle warmer, \$1; baby bath, \$1; mail box, \$1. Engelbertink, Ext. 2218.

LG ANTIQUE SPINNING WHEEL - Spinet piano, good cond, reasonable. 924-3554 eves.

SINGER SEWING MACHINE - \$20, elec drive. Ext. 2814.

FRIGIDAIRE - GM, in perf running cond, 14 yrs old, first offer takes it. Andy, Ext. 2516, 751-0453.

FORTUNE FINDERS! - WW II mine (metal) detector, excel cond, w/visual & audio indicators. Orig price \$65, asking \$45. W. Stars, 324-5692 eves.

RANGER FM CAR(12 V) STEREO - 4 & 8 track stereo one unit, 7 watts per chan output, excel cond. Orig \$160, asking \$125 incl more than a dozen asstd tapes. W. Stars, 324-5692 eves.

REFRIG - RCA Whirlpool, 11 cu ft storage, 3 cu ft across the top freezer, auto defrost, very good cond. \$85. 286-0881.

GE IRON - Delux spray, steam & dry, \$5; toaster, \$3. Ext. 507/2895.

AURORA HO RACING SET - Over 40' of track, 7 run-nig cars, many access, transformers, controls, etc. 286-0783.

JOINTER/PLANER - 6½" Craftsman, ½ hp motor, stand & belt guard, hardly used. \$160. Ext. 2298, 286-0783 eves & weekends.

RADIAL SAW - 10" Craftsman, hardly used, plus stand, casters & light. \$200; plus many accessories, \$280. Ext. 2298, 286-0783 eves & weekends.

ALUM COMB STORM WINDOWS - 1-47"x31", 3-47"x30". 281-9411 after 5.

KITCHEN CABINET - Attaches under soffit, new, 15"h, 36"w, 12"d. Les, Ext. 7762.

BEAGLE PUPS - Male or female, 7 wks old, AKC, good hunting stock. \$35 ea. 732-7015.

21" TV SET - Magnavox light weight console, b&w, good cond. \$40 or best offer. F. Haxo, Ext. 7208.

3 BICYCLES - 26", 24" & 16". Ext. 2834, 744-5079.

GE PORTABLE DISHWASHER - 2 yrs old, \$125; Philco 16 cu ft freezer, 3 yrs old, \$125; 2 maple dressers, good cond, \$25. Ext. 7278.

NEW SUPER 8 MOVIE CAMERA - 84P, \$60; TV, \$10; iron, \$4; hair dryer, \$5; elec kitchen clock, \$3. Ext. 7723.

\$3 GOLD PIECE - 1854, cond fine. Asking \$75. 924-4063, 281-3299.

BABY FURN - Crib w/mattress, new crib bumpers, playpen wood, infant seats. Ext. 2931.

REFRIG - Good cond, \$10; 21" TV, lg console, \$30. Ext. 2931.

CRIB & WOODEN PLAYPEN - Very good cond. 744-5079.

MIXER, BLENDER , CLOCK RADIO - 10 sp Dormeyer w/2 ss bowls, \$10; 1 spd Osterizer, \$5; Motorola AM, \$5. Phillips, Ext. 7617.

ELEC STOVE - Oven, 3 working burners, coppertone, \$20; wooden dresser, \$10. J. Thompson, Ext. 688, 924-3029.

DRYER - Frigidaire, pink, \$45. Whitey, Ext. 2179.

RUGS - Green/pad, 12'x18', wool, \$50; beige/pad, 9'x12', nylon, \$20; colonial green. oval, 8'x10', \$15. Whitey, Ext. 2179.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed or national origin of the applicant.

For Sale

SHOREHAM - 4 bedrm colonial, 2½ baths, fam, liv & din rms, 2 car garage, partial air cond, patio. \$35,500. 744-6657.

PT JEFF-BELLE TERRE - 10 rm center hall Dutch colonial, 4 bedrms, 2½ baths, 2 fireplaces, on 2 + wooded acres. Ext. 2191.

MEDFORD - 7 rm split level, 3 bedrms, lg eat-in kit-chen, 1½ baths, 12x20 paneled fam rm, util rm, garage, w/w, redecorated. \$22,990. 289-1925.

BELLPORT VILLAGE AREA - Owner transferred; im-maculate 4 yr custom 3 bedrm colonial ranch, liv rm- lg fireplace, din rm, util rm, 1½ garage, fenced & landscaped, low taxes. \$29,700. Ext. 7525.

SHOREHAM - 5 bedrm ranch on wooded ¾ acre. Liv, kit, den, fin base, gar, 1½ baths, s/s, w/w, f.p., beach rights, low taxes. Short walk to Post Office, stores & beach. \$40,000. 744-2372.

For Rent

2½ RM BSMT APT - Priv entrance, util incl. LT9-5951.

BAYPORT - Charming 1851, furn, 1 yr Sept, mod kit-chen, 1½ baths, fireplace, 6 rms incl lg studio (or storage), ¾ acre, trees, barn, walk to village, bay, buses. Ext. 2962, HR2-1397.

MATTITUCK - Cape cod, unfurn, 3 bedrms, 1½ baths, fireplace, lg liv rm, lg kitchen & din rm, walking dis-tance to village, church & stores, 1 yr lease starting 8/15/71. \$250 mo plus util. 324-5692 after 6.

Wanted

HOMES FOR KITTENS - 2 tiger grey males, 1 blk female. Commerford, Ext. 2919, 281-7547.

HOME - For adorable blk w/white male kitten, 8 wks old. 281-5289.

FREEZER - Reasonable. Ext. 640 between 12:00 & 12:45, 727-3608 after 5.

GOOD HOME - For sm blk Spitz-Terrier dog, excel w/children, needs fenced-in yard, all shots, spayed. L. Petro, 286-8249.

PEOPLE - Interested in BNL group flight to Europe. \$240 round trip in summer, \$160 in Sept. R. Horwitz, Ext. 2725.

HOMES - 4 impish kittens, 3 wks & 8 wks, 3 males, 1 female, all colors & varieties, all litter-trained, ram-bunctious, healthy. Ext. 7733, 744-1540.

BOY'S BIKE - For 12 yr old, 1 in fair cond acceptable. Ken, Ext. 7483.

HOME - For 2 water turtles. 744-5079.

WILL DO PROFESSIONAL ALTERATIONS - & other sewing, also instruction. Ext. 523.

TYPEWRITER - Late model in good cond, reasonable. Ext. 7534.

REASONABLE ESTIMATES - For completion of an existing dormer; carpentry, elec work, plumbing. 289-5730 after 6.

HOME - For baby white guinea pig (female), w/cage if needed. Frank, Ext. 2852.

Carpools

JOIN OR START CARPOOL - From vicinity of LI Expwy Exit 57. Ext. 2153.

RIDE NEEDED - To & from Selden (on Rt 25) from 8/2-8/27, will discuss \$. S. Blumlein, Ext. 2821/2353.

DRIVER - Would like to join carpool, Blue Point area. Worthington, Ext. 2158.

Selected Reading

Phys. Today 24, July 1971  
Sociology of refereeing. H. Zuckerman and R.K. Merton. 28-33

Proc. Roy. Soc. (London) 178B, June 15, 1971  
The Bernal Lecture, 1971. Science and anti-science. E. Ashby. 29-42

N.Y. Review of Books 16, July 1, 1971  
The Annual Meeting of the National Academy of Sciences. S. Smale. 38-9

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Deadline is 12 noon Friday for publication the following week.

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2. All items for sale or rent must be the advertiser's property.
3. Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
4. Firearms offered for sale or trade may not be brought on site.

5. Ads not carried because of space restrictions will be held for publication in the next issue.
6. Ads are run only once and must be resubmitted if they are to be repeated.
7. Ads should be restricted to 20 words or less and typed or printed on the form provided, and must bear the employees signature.

- ☐ For Sale: Auto & Auto Supplies

☐ For Sale: Boats & Marine Supplies

☐ For Sale: Miscellaneous

- ☐ Wanted

☐ Carpools

☐ Lost & Found

Check ☒ the heading applying to your ad.  
Print or type your ad in 20 words or less.

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